

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-83 Cancelled

Claim 84. (New) An isolated nucleic acid molecule which encodes the polypeptide SEQ ID NO:14.

Claim 85. (New) An isolated nucleic acid molecule comprising the nucleic acid sequence SEQ ID No: 1.

Claim 86. (New) An isolated nucleic acid molecule which is anti-sense to the nucleic acid molecule of claim 84.

Claim 87. (New) An isolated nucleic acid molecule which encodes a fusion protein, said fusion protein comprising the polypeptide encoded by the nucleic acid molecule of claim 84 and a second polypeptide.

Claim 88. (New) The nucleic acid molecule of claim 87 wherein the second polypeptide is a heterologous signal peptide.

Claim 89. (New) The nucleic acid molecule of claim 87 wherein the second polypeptide has adjuvant activity.

Claim 90. (New) The nucleic acid molecule of claim 84, operably linked to one or more expression control sequences.

Claim 91. (New) A vaccine vector comprising the nucleic acid sequence selected from any one of:

(i) SEQ ID No: 1; or

(ii) a nucleic acid sequence which encodes the polypeptide of SEQ ID NO:14;

wherein the nucleic acid sequence is capable of being expressed.

Claim 92. (New) The vaccine vector of claim 91 comprising a hybrid gene, wherein the hybrid gene encodes a fusion polypeptide, wherein the fusion polypeptide comprises the polypeptide of

SEQ ID No:14; and

a heterologous polypeptide;

wherein the hybrid gene is capable of being expressed.

Claim 93. (New) The vaccine vector of claim 92 wherein the second polypeptide is a heterologous signal peptide.

Claim 94. (New) The vaccine vector of claim 92 wherein the second polypeptide has adjuvant activity.

Claim 95. (New) The vaccine vector of claim 91 wherein the nucleic acid is operably linked to one or more expression control sequences.

Claim 96. (New) The vaccine vector of claim 91 wherein the polypeptide-encoding nucleic acid is the first nucleic acid, and wherein the vaccine vector further comprises a second nucleic acid encoding an additional polypeptide which enhances the immune response to the polypeptide expressed by said first nucleic acid.

Claim 97. (New) The vaccine vector of claim 96 wherein the additional polypeptide is a *Chlamydia* polypeptide.

Claim 98. (New) A pharmaceutical composition comprising the nucleic acid according to claim 84 and a pharmaceutically acceptable carrier.

Claim 99. (New) A pharmaceutical composition comprising a pharmaceutically acceptable carrier or diluent, and a nucleic acid molecule which encodes the polypeptide of SEQ ID NO:14; wherein the nucleic acid is capable of being expressed.

Claim 100. (New) A unicellular host transformed with the nucleic acid molecule of claim 90.

Claim 101. (New) A method for preventing or treating *Chlamydia pneumoniae* infection comprising administering to a patient an effective amount of:

- (a) the nucleic acid according to claim 84;
- (b) a vaccine vector wherein the vaccine vector comprises the nucleic acid according to claim 84;
- (c) a pharmaceutical composition comprising the nucleic acid according to claim 84 and a pharmaceutically acceptable carrier; or
- (d) the polypeptide encoded by the nucleic acid according to claim 84 in the reading frame set forth in SEQ ID NO:14.